

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (Currently Amended) A system for provisioning ~~packet based communication channels and time-division multiplexed (TDM) communication channels on a subscriber line communication medium~~, and the system comprising:

- a pair of X-DSL modems configured to couple to one another via the ~~subscriber line communication medium and to communicate with one another over the communication medium via an X-DSL modulated communication channel~~;
- a first of the pair of X-DSL modems including:
  - input buffers configured to accept input of ~~both the~~ ~~at least one~~ TDM communications channels together with ~~the~~ ~~at least one~~ packet based communications channels ~~and the~~ ~~at least one~~ TDM communication channel ~~including successive TDM frames~~;
  - a payload framer coupled to the input buffers and the payload framer loading ~~a~~ corresponding portions of ~~the~~ ~~at least one~~ TDM communications channels into each X-DSL frame, together with ~~a~~ corresponding portions of the ~~at least one~~ packet based communications channels into a remaining portion of each X-DSL frame; and ~~the payload framer additionally loading each X-DSL frame with a parameter for synchronizing the frames of the~~ ~~at least one~~ TDM communication channel ~~on the first of the pair of X-DSL modems and a second of the pair of X-DSL modems; and~~
- a ~~the~~ second of the pair of X-DSL modems including:
  - a payload deframer for deframing both the ~~at least one~~ TDM communications channels together with the corresponding portions of the ~~at least one~~ packet

based communications channels in each X-DSL frame from the first of the pair of modems, and

- a TDM frame synchronizer coupled to the payload deframer for synchronizing the TDM frames of the at least one TDM communication channel on the first of the pair of X-DSL modems and the second of the pair of X-DSL modems utilizing the synchronization parameter embedded in each X-DSL frame by the first of the pair of modems, thereby maintaining TDM frame synchronization despite variations in a number of bits transmitted in a unit of time on the X-DSL modulated communication channel.

Claim 2 (Currently Amended) The system of Claim 1, wherein the payload frame further embeds each X-DSL frame with a parameter for synchronizing the TDM communication channels processed by the pair of the modems. at least one TDM communication channel comprises a first TDM communication channel and a second TDM communication channel each comprising one of: a full T1 service and a fractional T1 service.

Claim 3 (Currently Amended) An X-DSL modem for provisioning packet-based communication channels and time division multiplexed (TDM) communication channels on a subscriber line, and the X-DSL modem configured to couple to a communication medium for communication with an opposing modem via an X-DSL modulated communication channel, and the X-DSL modem comprising:

- input buffers configured to accept input of both the at least one TDM communications channels together with the at least one packet based communications channels and the at least one TDM communication channel including successive TDM frames;
- a payload framer coupled to the input buffers and the payload framer loading a corresponding portions of the at least one TDM communications channels into each X-DSL frame, together with a corresponding portions of the at least

one packet based communications channels into a remaining portion of each X-DSL frame. and the payload framer additionally loading each X-DSL frame with a parameter for synchronizing the frames of the at least one TDM communication channel on the X-DSL modem and the opposing modem thereby maintaining TDM frame synchronization despite variations in a number of bits transmitted in a unit of time on the X-DSL modulated communication channel .

**Claim 4 (Currently Amended)** The X-DSL modem of Claim 3, wherein the payload framer further embeds each X-DSL frame with a parameter for synchronizing the TDM channels. at least one TDM communication channel comprises a first TDM communication channel and a second TDM communication channel each comprising one of: a full T1 service and a fractional T1 service.

**Claim 5 (Currently Amended)** A method for provisioning packet based communication channels and time-division multiplexed (TDM) communication channels on an X-DSL modulated subscriber line a communication medium, and the method comprising:

- accepting input of both the at least one TDM communications channels together with the at least one packet based communications channels and the at least one TDM communication channel including successive TDM frames;
- loading a corresponding portions of the at least one TDM communications channels into each X-DSL frame;
- determining a space availability in each X-DSL frame; and
- adding selected corresponding portions of the at least one packet based communications channel to into each X-DSL frame loaded in the loading act, subject to the space availability determination in the determining act

- loading each X-DSL frame with a parameter for synchronizing the frames of the at least one TDM communication channel despite variations in a number of bits transmitted in a unit of time on the X-DSL modulated communication channel.

Claim 6 (Currently Amended)

The method of Claim 5, further comprising wherein:

- embedding each X-DSL frame with a parameter for synchronizing the TDM communication channels. the at least one TDM communication channel comprises a first TDM communication channel and a second TDM communication channel each comprising one of: a full T1 service and a fractional T1 service.